

Title (en)
Memory module with reduced access granularity

Title (de)
Speichermodul mit verminderter Zugriffsgranularität

Title (fr)
Module de mémoire avec granularite d'accès réduite

Publication
EP 2113923 B1 20200729 (EN)

Application
EP 09167223 A 20070430

Priority
• US 38134906 A 20060502
• EP 07782931 A 20070430
• US 2007067814 W 20070430

Abstract (en)
[origin: US2007260841A1] A memory module having reduced access granularity. The memory module includes a substrate having signal lines thereon that form a control path and first and second data paths, and further includes first and second memory devices coupled in common to the control path and coupled respectively to the first and second data paths. The first and second memory devices include control circuitry to receive respective first and second memory access commands via the control path and to effect concurrent data transfer on the first and second data paths in response to the first and second memory access commands.

IPC 8 full level
G06F 13/16 (2006.01); **G06F 13/42** (2006.01); **G11C 5/04** (2006.01); **G11C 7/10** (2006.01); **H05K 1/18** (2006.01)

CPC (source: EP US)
G06F 12/1081 (2013.01 - US); **G06F 13/1642** (2013.01 - EP US); **G06F 13/1663** (2013.01 - EP US); **G06F 13/1678** (2013.01 - EP US); **G06F 13/1684** (2013.01 - EP US); **G06F 13/28** (2013.01 - EP US); **G06F 13/4243** (2013.01 - EP US); **G11C 5/04** (2013.01 - EP US); **G11C 7/1012** (2013.01 - EP US); **G11C 7/1045** (2013.01 - EP US); **G11C 7/1075** (2013.01 - EP US); **H05K 1/181** (2013.01 - EP US); **G06F 2212/656** (2013.01 - US); **H05K 2201/09227** (2013.01 - EP US); **H05K 2201/10159** (2013.01 - EP US); **Y02D 10/00** (2017.12 - EP US); **Y02P 70/50** (2015.11 - EP US)

Citation (examination)
• US 2004105292 A1 20040603 - MATSUI YOSHINORI [JP]
• US 2004256638 A1 20041223 - PEREGO RICHARD [US], et al
• US 2004221186 A1 20041104 - LEE JUNG-BAE [US], et al
• EP 0910091 A2 19990421 - ALTERA CORP [US]
• US 2004225853 A1 20041111 - LEE TERRY R [US], et al

Cited by
TWI828279B

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
US 2007260841 A1 20071108; EP 2016497 A2 20090121; EP 2016497 B1 20140716; EP 2113923 A1 20091104; EP 2113923 B1 20200729; EP 2393086 A2 20111207; EP 2393086 A3 20120201; EP 2393086 B1 20190313; EP 2413327 A1 20120201; EP 2413328 A1 20120201; JP 2009535748 A 20091001; JP 5249926 B2 20130731; US 10191866 B2 20190129; US 10795834 B2 20201006; US 11467986 B2 20221011; US 2009157994 A1 20090618; US 2012159061 A1 20120621; US 2015089163 A1 20150326; US 2017132150 A1 20170511; US 2017329719 A1 20171116; US 2019205268 A1 20190704; US 2021049115 A1 20210218; US 8028144 B2 20110927; US 8364926 B2 20130129; US 9256557 B2 20160209; WO 2007130921 A2 20071115; WO 2007130921 A3 20080417

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US 38134906 A 20060502; EP 07782931 A 20070430; EP 09167223 A 20070430; EP 11179126 A 20070430; EP 11184623 A 20070430; EP 11184627 A 20070430; JP 2009510005 A 20070430; US 2007067814 W 20070430; US 201213408950 A 20120229; US 201414558517 A 20141202; US 201615295723 A 20161017; US 201715665284 A 20170731; US 201816223031 A 20181217; US 202017009102 A 20200901; US 39207109 A 20090224